



Sustainable Nature Based Tourism: Planning and Management

Report on Visitation and Use at Dubuji, Far North Queensland, 2009/2010



Julie Carmody and Bruce Prideaux



Australian Government
Department of the Environment,
Water, Heritage and the Arts



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Dubuji, Far North Queensland, 2009/2010

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Supported by the Australian Government's
Marine and Tropical Sciences Research Facility
Project 4.9.2 Sustainable Nature Based Tourism: Planning and Management

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ISBN 978-1-921359-90-3

This report should be cited as:

Carmody, J. and Prideaux, B. (2011) *Sustainable Nature Based Tourism: Planning and Management. Report on Visitation and Use at Dubuji, Far North Queensland, 2009/2010.* Report to the Marine and Tropical Sciences Research Facility. Published by the Reef and Rainforest Research Centre Limited, Cairns (63pp.).

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March 2011

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Acronyms and Abbreviations

DERM	Queensland Department of Environment and Resource Management
MTSRF	Marine and Tropical Sciences Research Facility
N	Entire survey sample
n	Portion of survey sample
QPWS	Queensland Parks and Wildlife Service
WTMA	Wet Tropics Management Authority
WTWHA	Wet Tropics World Heritage Area

Acknowledgements

Funding for this research was provided by the Australian Government's Marine and Tropical Sciences Research Facility (MTRSF) and the Wet Tropics Management Authority.

We would like to thank the following people for their assistance. Those involved in the distribution and collection of surveys were Fay Falco-Mammone, Debbie Cobden and Jonathan Sibbain. Data entry was completed by Debbie Cobden.

We would also like to acknowledge the assistance of Max Chappell of the Wet Tropics Management Authority; and Andrew Millerd, Tina Alderson and Delys Wilson from the Queensland Department of Environment and Resource Management.

Key Findings

The following key findings are based on a visitor survey (N = 219) undertaken at Dubuji, near Cape Tribulation, between October 2008 and April 2010. Where findings are reported as a mean, 1 represents the lowest level of agreement with given statements by survey respondents, while 6 represents the highest level of agreement.

Respondent Profile

- More international (55.5%) than domestic (44.5%) visitors were surveyed at Dubuji.
- Respondents ranged from 19 to 91 years of age. The average age was 37 years.
- Over half (59.1%) of the respondents were travelling as a couple with no children.

Travel Patterns

- Respondents reported travelling to the site from Cape Tribulation (15.1%), Port Douglas (14.6%), Daintree (12.7%) and Cairns (11.2%).
- After leaving Dubuji, respondents intended to travel on to Cairns (20.7%), Port Douglas (11.7%), Cape Tribulation (8.4%) or their accommodation (7.5%).
- The main information sources used were a map (32.3%), travel guide book (26.1%), road sign (25.7%) and word-of-mouth (21.4%).

Reasons for Visiting Dubuji

- The most popular reasons for visiting the site were to see the natural features and scenery (mean = 5.48) and to be close to nature (5.32).

Perceptions of the Natural Environment

- The natural environment at Dubuji is considered to be well-managed (mean = 5.71), interesting (5.41), in good condition (5.20) and appealing in terms of scenic beauty (5.14).
- The site was not considered to be disturbed and impacted (mean = 2.72).

Perceptions and Use of the Site Facilities

- The condition of the facilities are perceived as good (mean = 5.08), well managed (5.08) and adequate (5.06).
- The boardwalk was the site's most popular facility (86.2%).

Perceptions of Signage

- Signage outlines the site's rules and safety was easy to understand (mean = 5.23).
- The signs, maps and directions were considered easy to find (mean = 5.14).

Satisfaction with the Visitor Experience

- The boardwalk and beauty of the environment enhanced the visitor experience.
- The behaviour of other visitors at the site did not affect the visitor experience.

CAPE TRIBULATION - DAINTREE NATIONAL PARK

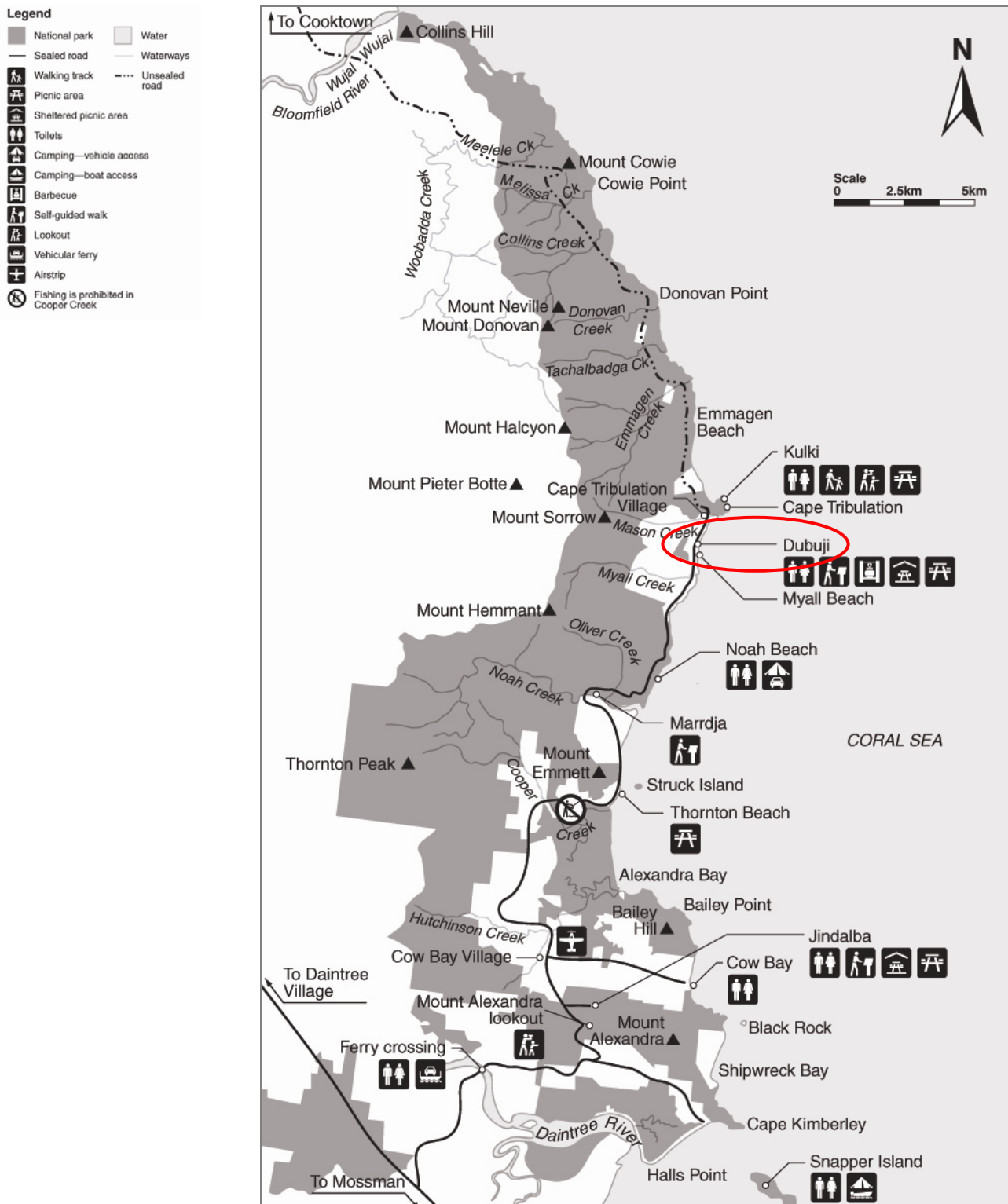


Figure i: Cape Tribulation (Daintree National Park), showing the Dubuji visitor site (circled). Map courtesy of Queensland Parks and Wildlife Service, Department of Environment and Resource Management.

1. Introduction

This report is one of a series of ten that examine visitor activity at sites within Wet Tropics rainforests. The aim of the research was to provide a snapshot of visitor activity to inform management on how sites are used and investigate visitors' views on site management. Visitor data was collected using a self-completed visitor survey. Collectively the series of reports will provide an overall understanding of how visitors use the rainforest and provide managers with feedback that can be used for site management and future planning.

Responsibility for the management of the Wet Tropics rainforests is shared by the Wet Tropics Management Authority (WTMA) and the Queensland Department of Environment and Resource Management (DERM). The WTMA was established after listing of the Wet Tropics as a World Heritage site and is responsible for the planning of visitor sites across the Wet Tropics World Heritage Area (WTWHA). The Queensland Parks and Wildlife Service (QPWS), an agency of the DERM, has responsibility for the day to day management of site infrastructure including toilets, car parking, signage, viewing lookouts, boardwalks, walking trails and other recreational facilities. The Wet Tropics has a large number of visitor sites, some of which have high rates of visitation. A number of sites have relatively low visitation rates, but all offer unique nature-based visitor experiences.

1.1 Site Location and Description

The Dubuji visitor site is located just south of Cape Tribulation Village and provides access to Myall Beach (see Figure i). Located on the traditional lands of the Eastern Kuku Yalanji people, Dubuji means 'place of spirits'. The site, now part of the Daintree National Park, was formally part of a logging lease before being purchased in the 1970s by alternative lifestyles who established a commune and fruit orchard. The site was purchased as part of the Daintree Rescue Program in 1996 and has since been revegetated and developed as a QPWS visitor site. It is now one of two major visitor sites in the Cape Tribulation section of the Daintree National Park.

The major feature of the Dubuji visitor site is a 1.2 kilometre boardwalk that connects the site's parking area with Myall Beach. The boardwalk was built to allow visitors to view examples of the region's lowland rainforest swamps and mangroves. Visitor facilities provided at the site include picnic tables, gas barbecues, composting toilets and a large shelter with interpretative signage. Many of the picnic tables are protected from the weather. A number of interpretative signs have been provided to allow visitors to understand aspects of the site's natural heritage. Camping is prohibited at Dubuji.

1.2 Previous Research

A visitor use monitoring strategy was commissioned in 1993 by the WTMA to gain an understanding of visitor use and travel patterns. Manidis Roberts Consultants conducted visitor surveys in the wet season (March/April) and again in the dry season (September/October) of 1993 across 56 individual visitor sites and three conglomerate sites within the WTWHA. The research approach included traffic counts, site observations and visitor interviews. Three different surveys were used – one for independent travellers, one for those travelling with a commercial operator and one left at sites as a self-registration survey.

The 1993 study (N = 287) estimated that on an annual basis Dubuji is visited by 6,759 vehicles and 33,786 persons. About one third of the respondents (37.8%) walked to the site from other locations in Cape Tribulation. At the time, independent travellers were identified as the largest visitor segment. Eighty percent of respondents were visiting the site for the

first time. The main activities undertaken were walking (80%), swimming (34.1%) and relaxing (24.3%). The top five features of the site were the natural environment, tranquillity, rainforest, natural beauty and the walking track/boardwalk. Two features that detracted from the site's appeal were the lack of rubbish bins (22.1%) and litter (22.1%). Visitor surveying has not been conducted at Dubuji since 1993.

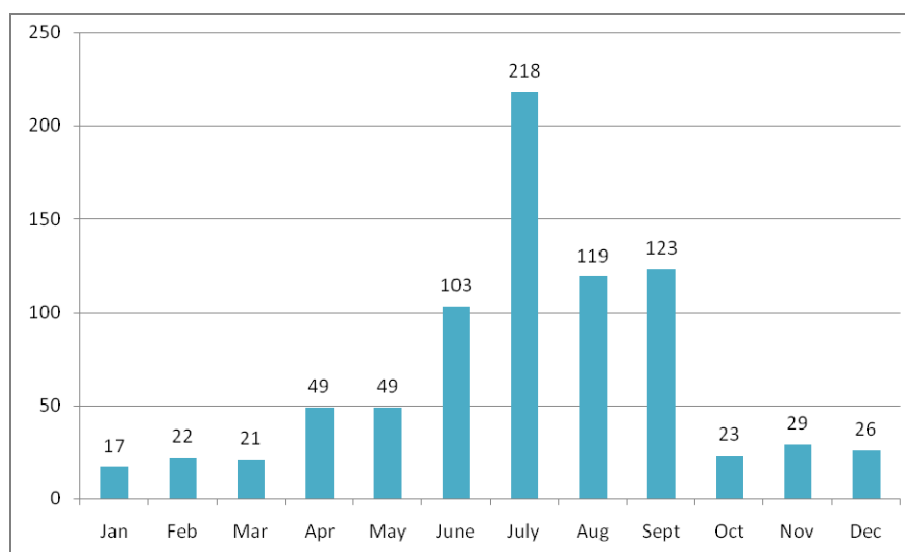
1.3 Traffic Counter Data

Traffic data was collected at the site by QPWS rangers during 2009. Table 1 overviews traffic counter data on a monthly basis showing the average number of vehicles using the site per day for each month. Peak visitation months were June to September, with July recording the highest peak in visitation (an average of 218 vehicles per day). Use of the site during the wet season is low. Figure 1 illustrates the average daily vehicles (as per Table 1) recorded during 2009. The lowest periods of visitation were January to March and October to December.

Table 1: Overview of average monthly and daily vehicular traffic recorded at Dubuji during 2009. Data courtesy of Queensland Parks and Wildlife Service, DERM.

Month	Vehicles per month	Average vehicles per day
January	527	17
February	602	22
March	665	21
April	1489	49
May	1489	49
June	3104	103
July	6772	218
August	3703	119
September	3703	123
October	707	23
November	870	29
December	807	26

Figure 1: Average vehicular traffic recorded at Dubuji by month, 2009. Data courtesy of Queensland Parks and Wildlife Service, DERM.



2. Methodology

The aims of this report are to:

- Investigate visitor activities undertaken at Dubuji; and
- Identify visitors' views about aspects of the site including its management.

Specific objectives of the research were to:

- Provide a snapshot profile of visitors to the Dubuji visitor site;
- Understand visitors' perceptions of the management of the site;
- Understand visitors' perceptions of the natural environment at the site;
- Gain an understanding of visitors' travel patterns within the Wet Tropics region; and
- Assess the suitability of the interpretative information provided at the site.

A convenience sampling technique was used and data was analysed with the SPSS v17 statistical package.

This research complements earlier research (Carmody and Prideaux, 2008) that investigated how local residents used the Wet Tropics and their views on its management.

2.1 Survey Instrument

To collect data on a range of issues related to visitor expectations and experiences, a survey (Appendix 1) was developed in conjunction with officers from the WTMA. The survey instrument was based on a previous survey used in 2001/2002 which enabled some general comparisons to be made with earlier research. The self-completed survey contained 29 closed and open-ended questions and provided space for respondents to write additional comments. Open-ended questions were used because they can test specificity of knowledge more effectively (as shown by Whitmarsh, 2009), provide richer responses (Altinay and Paraskevas, 2008) and can minimise social desirability bias (Budeanu, 2007). Survey questions were grouped into eight sections commencing with demographic data. Table 2 outlines the components of the survey. Survey staff recorded site details including location, date, time of collection and weather conditions on the front cover of the survey instrument.

Table 2: Components of the Dubuji visitor survey.

Section A	Background information	Place of residence, occupation, education, age, gender
Section B	Travel and transport	Organised tour or free and independent traveller, travel party, mode of transport, pre- and post-visit of site, experience of protected natural areas
Section C	Reasons for visiting	Motivations, activities, time spent at site, willingness to pay
Section D	Natural environment	Perceptions of the natural environment
Section E	Site facilities	Use of site facilities, expectations of facilities, perceptions of facilities, ranger presence
Section F	Information	Prior information search, perceptions of on-site information, additional information required
Section G	Visitor experience	Aspects of visit that enhanced and detracted from experience, perceptions of crowding
Additional comments		Open-ended to allow for any comments and feedback

2.2 Survey Collection

Surveying was undertaken by two experienced research assistants who were stationed at the picnic area between the walkway to Myall Beach and the site toilets. Using a convenience sampling technique, visitors returning from the boardwalk or beach were approached and asked to complete the survey. The purpose of the survey and the approximate time required to complete the instrument was explained to potential respondents. A postcard or WTMA cassowary sticker was offered as a token of appreciation to those returning the survey. Table 3 outlines the schedule and collection of surveys for the site.

Table 3: Dubuji visitor survey collection times and details (N = 219).

Date	Day	Weather	Visitor Frequency	Percent of Total
28 October 2008	Tuesday	Sunny	7	3.2
29 October 2008	Wednesday	Sunny	3	1.4
31 July 2009	Friday	Overcast	116	53.0
27 November 2009	Friday	Sunny	15	6.8
24 April 2010	Saturday	Raining	4	1.8
25 April 2010	Sunday	Overcast and raining	41	18.7
26 April 2010	Monday	Overcast	33	15.1
Total			219	100.0

Surveys were collected on weekdays and weekends between 11:00am and 6:00pm (Figure 2). Visitation generally peaked between 1:00pm and 4:00pm, and few visitors were observed before noon.

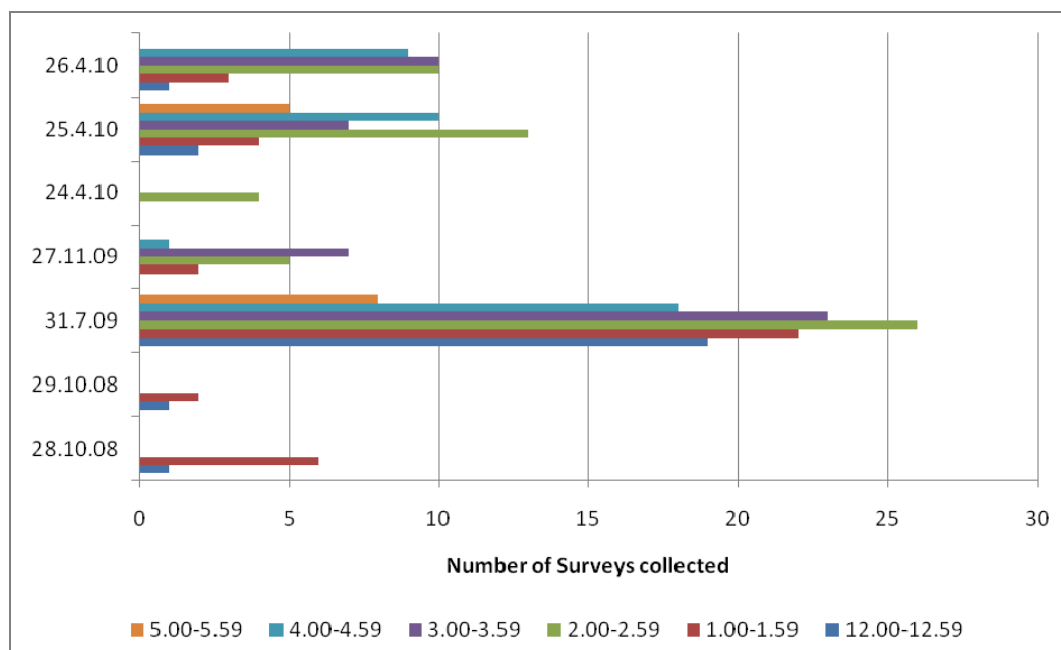


Figure 2: Surveys collected at Dubuji by date and time (N = 219).

2.3 Non-response and Observations

Reasons given for not completing the survey are outlined in Table 4. Of the 268 people approached, 18.2% declined (n = 49), citing either a lack of time to do so (9.3%) or that they were not interested (4.8%).

Table 4: Reasons given for not participating in the Dubuji visitor survey (n = 49).

Reasons for not participating in survey	Frequency (n)	Percentage of total number of people approached (n = 268)
Not enough time to participate	25	9.3
Not interested in participating	13	4.8
With tour group	7	2.6
Language barriers	3	1.1
No, thanks	1	0.4
Non-Response	49	18.2%

Limited observations were made of visitor behaviour during the survey period. On 29 October 2008, a quantity of empty beer bottles was observed in the car park. On 26 April 2010, three travel parties were observed walking dogs through the day use site towards Myall Beach. On the same weekend the site's barbeque facilities were not operational, much to the annoyance of several visitors.

2.4 Limitations

There were some limitations associated with the research that should be considered prior to generalising the results:

- First, the survey was conducted using a convenience sampling approach and may not be representative of all visitor segments using the site;
- Second, the sample size was limited by time and budget constraints;
- Third, the survey was only available in English, resulting in a possible under-reporting of some nationalities visiting the site;
- Fourth, there was potential for social desirability bias occurring where respondents offered answers that are seen to be desirable or acceptable but may not reflect their true opinions. In most cases it is difficult to determine the level of social desirability for any given question; and
- Finally while commercial tour groups include Dubuji in their itineraries, only a limited number of tour group members agreed to complete the survey.

Understanding the Results

Both closed questions with specific response options and open-ended questions were used in the visitor survey. The advantage of closed questions is that it allows the researcher to investigate specific issues of interest while open-ended questions provide a good indication of top-of-mind responses and concerns of interviewees. Closed response questions generally asked respondents to use a six-point Likert scale. In the following discussion, the results of closed questions are reported as means and as the percentage breakdown by the six items on the Likert scale. Means are useful for ranking in order of importance while percentage breakdown gives a clearer indication of the strength of agreement or disagreement with a particular given statement. The following discussion should be read with these considerations in mind. It should also be noted that not every question was answered by all respondents, thus the 'n' values of tables and figures may vary. The 'n' value reports valid responses. The 'N' value reports the entire sample.



3. Findings

The results presented in this report are from the 219 completed Wet Tropics Visitor Site Level Surveys collected from the Dubuji visitor site between 2008 and 2010.

3.1 Respondent Profile

More females (55.5%) than males (44.5%) completed the Dubuji survey (N = 219).

Place of Residence

Respondents' places of residence are provided in Table 5. The majority of respondents were international visitors (59.9%), with the largest group from continental Europe (34.4%) followed by the United Kingdom (13.2%) and North America (9.9%). Domestic visitors were mainly from New South Wales (16.0%) and Victoria (9.9%).

Table 5: Origin of Dubuji survey respondents (n = 212).

	Frequency (n)	Percent (%)
DOMESTIC		
New South Wales	34	16.0
Victoria	21	9.9
North Queensland	10	4.7
Other Queensland	9	4.3
South Australia	7	3.3
Western Australia	4	1.9
Domestic Total	85	40.1
INTERNATIONAL		
Europe	73	34.4
England/ UK	28	13.2
North America	21	9.9
New Zealand	3	1.4
Other	2	0.9
International Total	127	59.9
Total Domestic and International	212	100.0

Occupation

The occupation of the respondents is provided in Figure 3. The largest group was professionals (33.4%), followed by students (20.0%). Most international respondents were either students (19.1%) or professionals (18.1%).

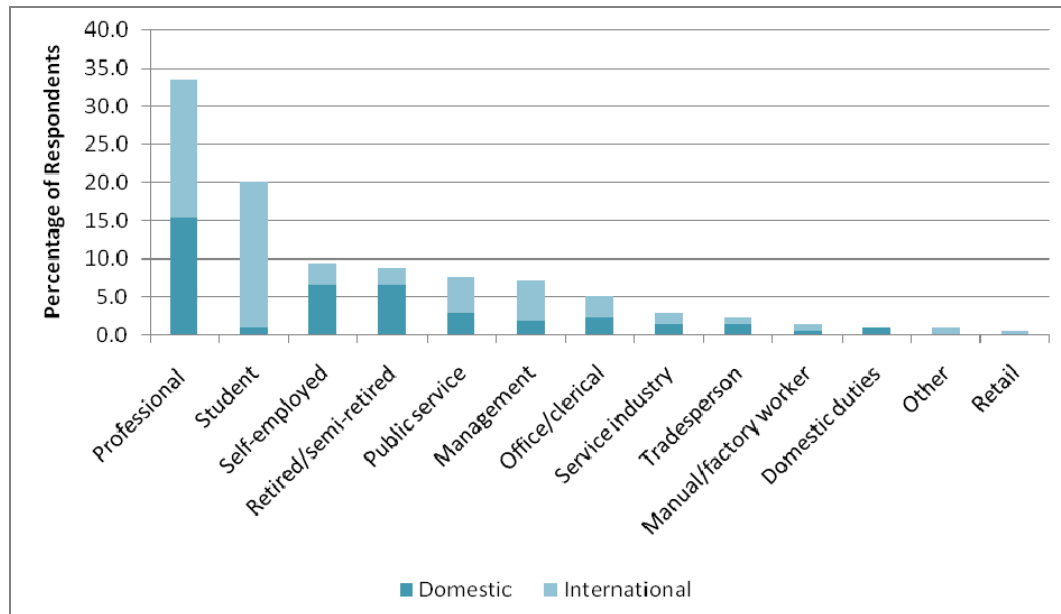


Figure 3: Occupations of Dubuji survey respondents (n = 215).

Age

Figure 4 highlights the age ranges of respondents by whether they were domestic or international visitors. Respondents ranged in age from 19 to 91 years with the average age of 37.1 years. The largest group of respondents based on age was the 20-29 year age group (42.7%) followed by those aged 30-39 years (18.8%). Respondents aged 20-29 years were mostly international visitors (19.1%). Respondents aged 50 years or more were predominantly domestic visitors (15.6%).

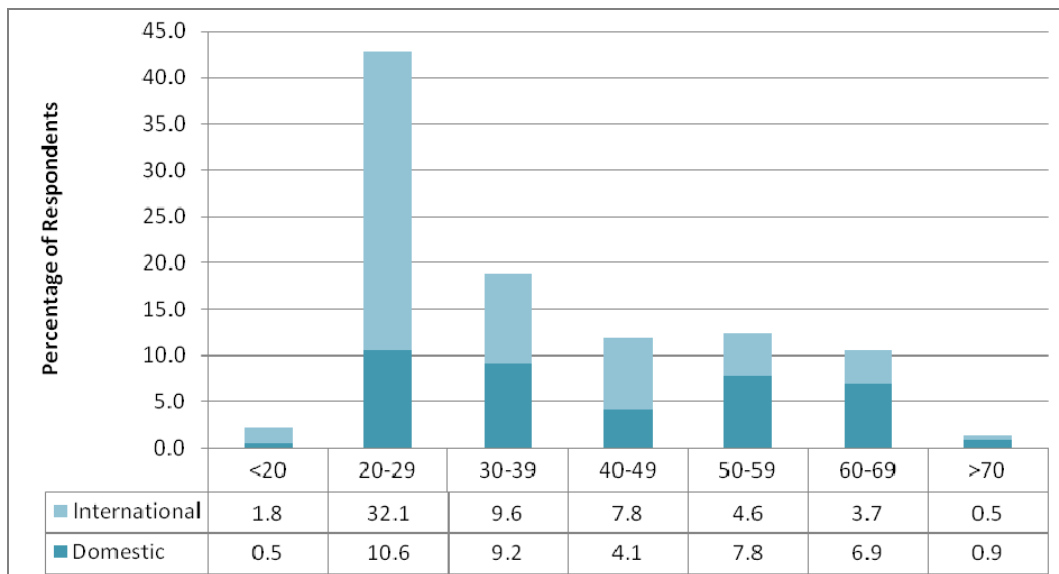


Figure 4: Age groups of Dubuji survey respondents (n = 218).

Education

Figure 5 illustrates survey respondents' education levels, where Tertiary A is defined as technical or further education, and Tertiary B is defined as a university qualification. For the whole sample, the largest group of respondents indicated they had attained the level of Tertiary B education (60.1%) while 19.7% of respondents reported having a Tertiary A education. International visitors were more likely to have a university qualification (38.0%) than their domestic counterparts (22.1%).

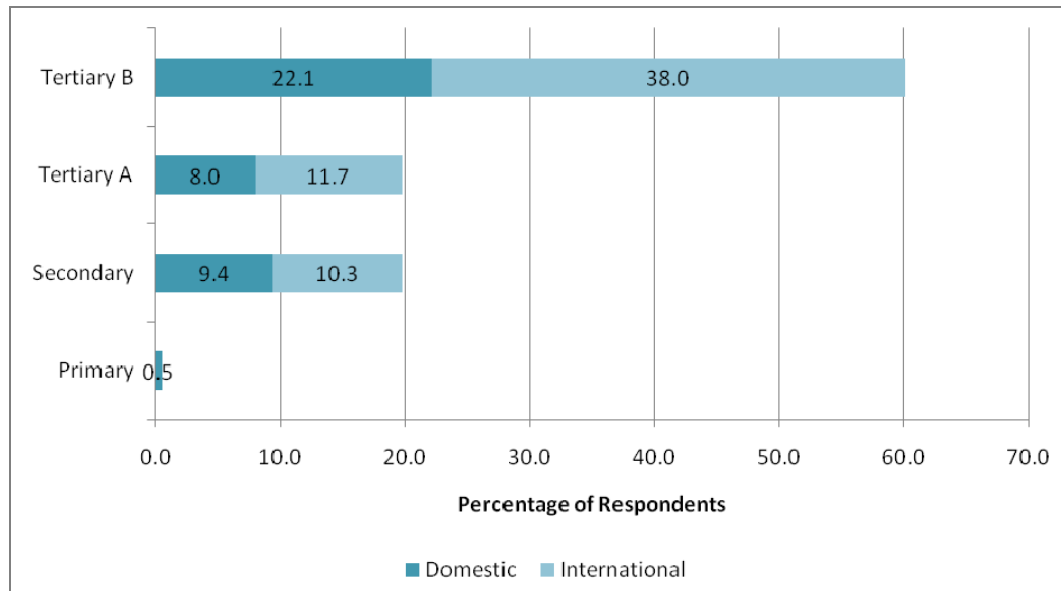


Figure 5: Levels of education attained by Dubuji survey respondents (n = 213).

A cross-tabulation analysis of respondents' age and education is provided in Table 6. The largest group of respondents had achieved a Tertiary B education and was aged 20-29 years (26.6%).

Table 6: Respondents' age and education (n = 214).

Age Group	Primary (%)	Secondary (%)	Tertiary A (%)	Tertiary B (%)
< 20 years	-	1.4	0.5	0.5
20-29 years	-	8.4	7.9	26.6
30-39 years	-	1.9	3.7	13.6
40-49 years	-	2.8	1.9	7.5
50-59 years	-	2.3	2.8	7.5
60-69 years	0.5	2.3	2.8	4.2
> 70 years	-	0.5	-	0.5
Total Respondents (n = 214)	0.5 (n = 1)	19.6 (n = 42)	19.6 (n = 42)	60.3 (n = 129)
Domestic	0.5 (n = 1)	9.4 (n = 20)	8.0 (n = 17)	22.1 (n = 47)
International	0 (n = 0)	10.3 (n = 22)	11.7 (n = 25)	38.0 (n = 81)

Travel Party and Mode of Transport

The majority of respondents reported travelling to Dubuji by rented vehicle (64.1%) while 33.6% travelled by private vehicle, 1.8% used public transport and 0.6% hitchhiked. Figure 6 indicates international visitors (44.3%) were more likely to use rented vehicles than domestic respondents (19.8%).

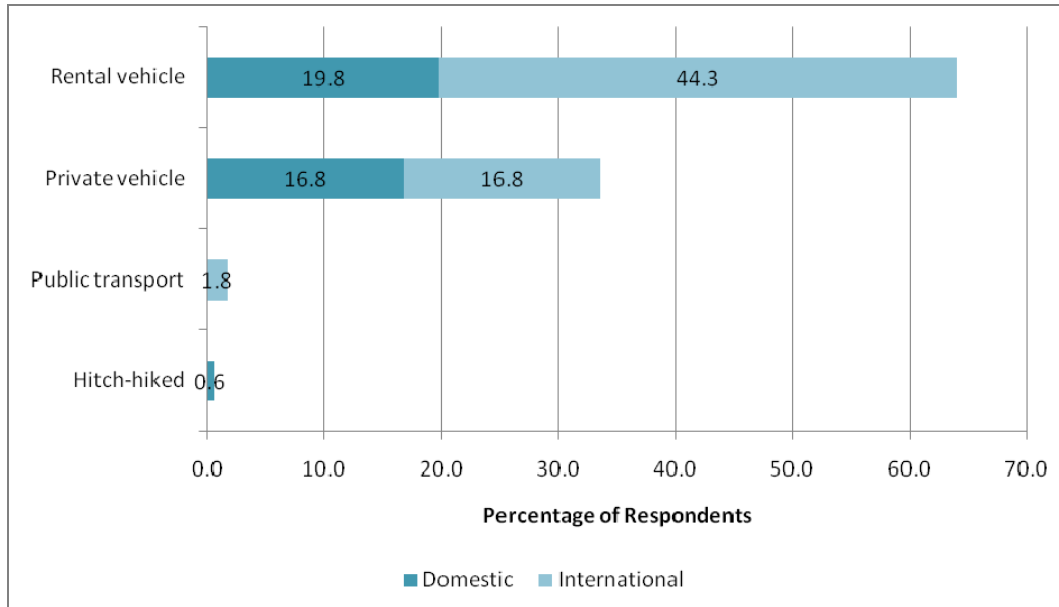


Figure 6: Modes of transport used by survey respondents to travel to Dubuji (n = 167).

Table 7 reports on travel party composition. The largest travel groups were respondents travelling with a companion, but without children (110 respondents), followed by parties of three adults with no children (29 responses) and parties of four adults with no children (18 responses). The average number of adults per travel party was 2.31 with a standard deviation of 0.79.

Table 7: Composition of visitor travel parties to Dubuji (n = 186).

	1 adult	2 adults	3 adults	4 adults	5 adults	6 adults
0 children	13	110	29	18	-	-
1 child	-	1	1	1	-	-
2 children	-	6	2	1	-	1
3 children	-	3	-	-	-	-
Adults per vehicle 2.31 ± SD 0.79 (range 1-6)						
Children per vehicle 0.18 ± SD 0.60 (range 0-3)						

Organised Tour Visitors

A small number ($n = 16$) of respondents reported being members of a commercial tour. As a consequence it was difficult to survey sufficient visitors to develop an informed view of this segment of the visitor market. For this reason the results outlined in Table 8 may not be a true reflection of the characteristics of respondents travelling on commercial tours. Responses were received from visitors travelling with one of five tour companies: Adventure Tours, Cape Tribulation Connections, Toe Knee, Contiki, Adventure Tours and Jungle Tours. Only one of the 16 respondents in this group was a domestic visitor. Respondents on tours can be described as mostly aged 20-29 years, who also hold a university qualification.

Table 8: Information about survey respondents who were part of an organised tour group visit to Dubuji ($n = 16$).

Tour Operator	Number of guests on each tour				Total No. of Respondents
	6 or less	7-14	15-30	More than 30	
Adventure Tours	-	-	2	-	2
Jungle Tours	-	-	1	-	1
Contiki	-	2	-	-	2
Cape Tribulation Connections	-	4	2	-	6
Toe Knee	-	-	5	-	5
Total No. of Respondents	-	6	10	-	16

Travel Flow

Respondents were asked about their travel patterns on the day of the survey, including where they had been and where they intended to go after leaving the site. Results are outlined in Tables 9 and 10. Respondents reported travelling from Cape Tribulation (15.1%), Port Douglas (14.6%), Daintree (12.7%) and Cairns (11.2%). A small number of respondents reported travelling from other visitor sites in the Daintree National Park including Myall Beach (3.9%), Emmagen Creek (3.9%) and Kulki (3.4%).

Table 9: Visitors' reported previous stop prior to arriving at Dubuji (n = 205).

	Frequency (n)	Percent (%)
Towns		
Cape Tribulation	31	15.1
Port Douglas	30	14.6
Daintree	26	12.7
Cairns	23	11.2
Cow Bay	7	3.4
Cooktown	5	2.4
Palm Cove	4	2.0
Mossman	2	1.0
Wonga Beach	2	1.0
Sydney	2	1.0
Atherton	1	0.5
Mission Beach	1	0.5
Thornton Beach	1	0.5
Alice Springs	1	0.5
Wujal Wujal	1	0.5
Innisfail	1	0.5
Natural Attractions		
Myall Beach	8	3.8
Emmagen Creek	8	3.8
Kulki	7	3.4
Mossman Gorge	5	2.4
Rainforest	5	2.4
Marrdja Boardwalk	4	2.0
Blue Hole, Coopers Creek	3	1.5
Mason's Waterhole	3	1.5
Daintree walk	2	1.0
Alexandra Range Lookout	1	0.5
Other Attractions		
Nowhere/ first stop	5	2.4
Daintree Discovery Centre	5	2.4
Daintree River Cruise	4	2.0
Home	3	1.5
Accommodation	2	1.0
Daintree Ice Creamery	1	0.5
PK's Jungle Village	1	0.5
Total	205	100.0

After leaving Dubuji, survey respondents indicated they would travel to Cairns (20.1%), Port Douglas (11.7%), Cape Tribulation (8.4%), and to their accommodation (7.5%). The locations listed in Table 10 indicate that many respondents were visiting the site as part of a day trip to Cape Tribulation.

Table 10: Intention of visitors to visit other places within the region after Dubuji (n = 214).

	Frequency (n)	Percent (%)
Towns		
Cairns	43	20.1
Port Douglas	25	11.7
Cape Tribulation	18	8.4
Cow Bay	9	4.2
Daintree	5	2.3
Palm Cove	5	2.3
Wonga Beach	4	1.9
Darwin	4	1.9
Mossman	3	1.4
Mareeba	3	1.4
Cooktown	3	1.4
Innisfail	2	0.9
Atherton	2	0.9
Whitsundays	2	0.9
Kuranda	2	0.9
Atherton Tablelands	1	0.5
Lindeman Island	1	0.5
Coconut Beach	1	0.5
Magnetic Island	1	0.5
Natural Attractions		
Mason's Waterhole	6	2.8
Myall Beach	5	2.3
Kulki	3	1.4
Noah Beach	2	0.9
Marrdja Boardwalk	1	0.5
Jindalba	1	0.5
Other Attractions		
Accommodation	16	7.4
Don't know	8	3.7
Campground	6	2.8
Daintree River Cruise	5	2.3
PK's Jungle Village	3	1.4
'Up north'	3	1.4

	Frequency (n)	Percent (%)
Home	3	1.4
Restaurant	3	1.4
Cape Trib Exotic Fruits	3	1.4
Daintree Discovery Centre	2	0.9
Cape Trib Bat House	2	0.9
Lync Haven	1	0.5
Cockatoo Ridge Retreat	1	0.5
Cooper Creek Tour	1	0.5
Staying here	1	0.5
Daintree Ice Creamery	1	0.5
Furthest point north on sealed road	1	0.5
Hartley's Creek Crocodile Farm	1	0.5
Reef trip	1	0.5
Total	214	100.0



Path to Myall Beach through Dubuji (Photo: Julie Carmody)

Visits to Protected Natural Areas

Respondents were asked about the frequency of their visits to protected natural areas. These results provide an indication of visitors' experiences in protected natural areas. Figure 7 indicates 43.0% of respondents visit natural areas between two and five times per year, while 35.7% visit more than five times per year. Only 2.4% of respondents indicated that the visit to Dubuji was their first visit to a protected natural area. There are no significant differences between the respondents' age, place of origin, occupation or motivation to visit and frequency of visitation to natural protected areas.

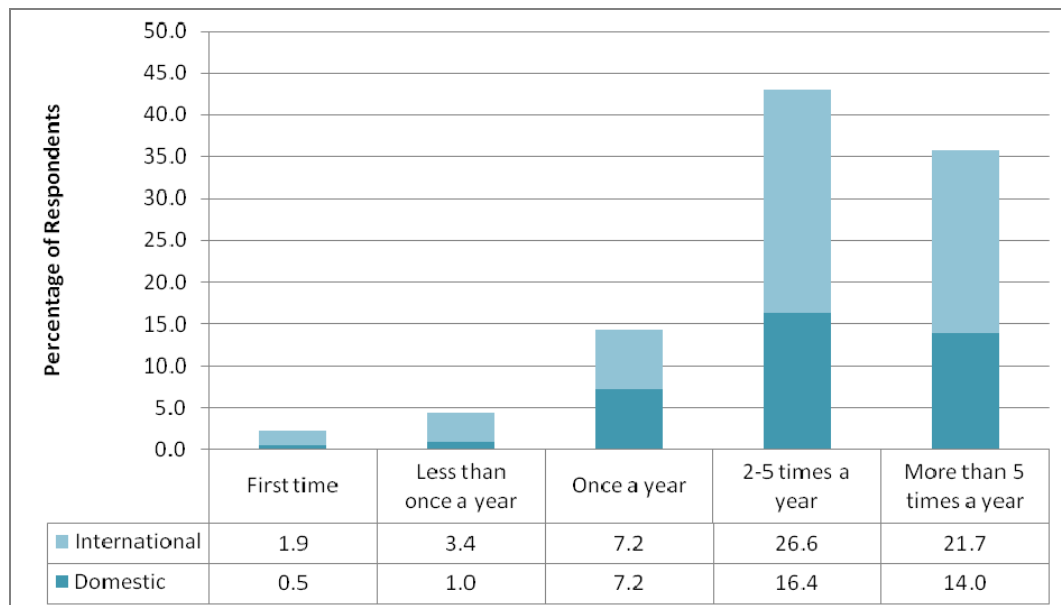


Figure 7: Survey respondents' frequency of visitation to protected natural areas (n = 207).

Reasons for Visiting Dubuji

Respondents were asked to respond to a series of questions about their motivations for visiting Dubuji. A six-point Likert scale of 1 (being 'not important') to 6 ('very important') was used. A mean of 4 or greater indicated that the motivation may be classed as important to very important. Table 11 indicates that the most important reasons for visiting the site for both international and domestic respondents were to see natural features and scenery (mean = 5.48), to be close to and/or experience nature (5.32) and the opportunity to undertake a short walk (4.40).

The opportunity to learn about Aboriginal culture (mean = 3.45) and socialise with family or friends (3.22) were not particularly important motivations for visiting the site. International visitors were more motivated than their domestic counterparts by the opportunity to see the natural features and scenery, be close to and experience nature and to learn about native animals and plants.

Table 11: Comparative domestic and international visitors' motivations to visit Dubuji.

Motivations to visit Dubuji	n	Overall Mean	Domestic visitors (mean)	International visitors (mean)
See natural features and scenery	214	5.48	5.37	5.55
Be close to/ experience nature	211	5.32	5.26	5.36
Opportunities for short walks	209	4.40	4.61	4.28
Experience tranquillity	205	4.35	4.68	4.14
Learn about native animals and plants	210	4.28	4.00	4.44
Because it is a World Heritage Area	210	4.26	4.35	4.19
Because it is a National Park	209	4.11	4.28	4.01
Outdoor exercise	210	3.97	4.28	3.78
Rest and relax	211	3.94	4.16	3.79
Opportunities for long walks	205	3.76	3.97	3.64
Learn about Aboriginal culture	209	3.45	3.23	3.60
Socialise with family or friends	204	3.22	3.17	3.25

Table 12 shows the level of importance ascribed to each motive on a scale from 'not important' to 'very important'. The site's designation as a National Park and a World Heritage listed site was considered important by 68.0% and 69.5% of respondents respectively. The opportunity to rest and relax was important for 65.8% of the sample.

Table 12: Survey respondents' most cited reasons for visiting Dubuji.

Reasons for visiting Dubuji	Percentage of survey respondents					
	Not important	Slightly important	Moderately important	Important	Quite important	Very important
See natural features and scenery	0.5	0.5	2.8	9.3	20.5	66.4
Be close to / experience nature	0.5	0.9	5.2	8.6	28.9	55.9
Opportunities for short walks	1.4	5.8	14.4	28.2	30.6	19.6
Experience tranquillity	2.0	5.8	19.5	25.4	22.4	24.9
Learn about native animals and plants	1.0	11.0	17.1	23.8	24.3	22.8
Because it is a World Heritage Area	4.8	9.5	16.2	19.0	25.7	24.8
Because it is a National Park	5.7	8.6	17.7	24.9	22.5	20.6
Outdoor exercise	3.8	11.9	20.5	29.0	17.2	17.6
Rest and relax	7.1	8.6	18.5	30.8	19.4	15.6
Opportunities for long walks	9.3	13.2	19.0	23.9	20.5	14.1
Learn about Aboriginal culture	12.4	13.4	25.8	23.0	15.4	10.0
Socialise with family or friends	23.5	11.8	20.1	19.6	14.2	10.8

Ten survey respondents provided other reasons for visiting Dubuji, including 'the rainforest' (three responses), 'party' and 'to escape civilisation' (two responses each). Single responses were received for 'the beautiful beach', 'fitness' and 'recommended by others'.

Activities

Respondents were asked to indicate which activities they had participated in at Dubuji. Results, illustrated in Figure 8, show the most popular activities were observing the scenery (79.0%), going for a short walk (77.6%), photography (67.3%), observing the wildlife (59.8%) and relaxing (53.7%). There were no significant differences between domestic and international visitors participating in these activities.

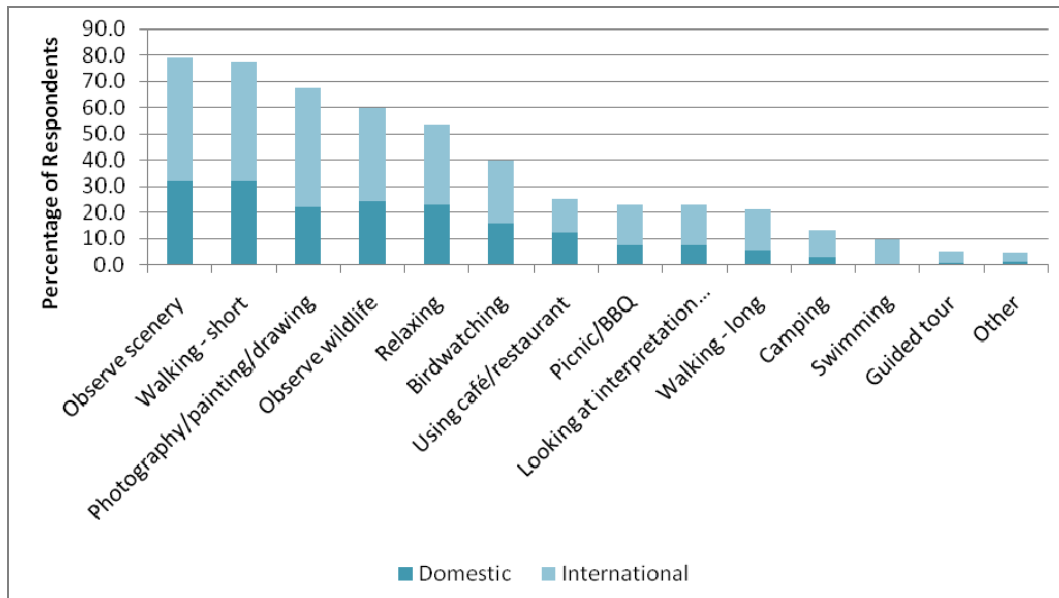


Figure 8: Activities undertaken at Dubuji as cited by survey respondents (n = 214) in response to a multiple-response survey question.

Using an open-ended survey question, respondents were asked to indicate if there were activities that they would have liked to have participated in, but could not. Sixty-five respondents (29.6% of the sample) gave 74 suggestions which are outlined in Table 13. Twenty-two respondents indicated they would have liked to have swum at Myall Beach, which at the time of the survey was closed due to the presence of marine stingers.

Other suggested activities included seeing a crocodile (ten responses), seeing wildlife (eight responses), taking a longer walk (four responses) and being out in the sun (four responses). Others identified the need for the public barbeque to be fixed, and a range of activities such as horseriding and jungle surfing, both of which are available in the nearby Cape Tribulation area.

Table 13: Activities which survey respondents would have liked to have undertaken at Dubuji, but could not (n = 65).

Activities	Overall (n)	Domestic (n)	International (n)
Swim – no stinger nets	22	4	18
See crocodile	10	1	9
See wildlife	8	1	7
Longer walk	4	3	1
Be in the sun	4	-	4
See large birds	3	-	3
Use BBQ facilities – don't work	3	1	2
Access information about the site	2	-	2
Jungle surfing	2	1	1
Bushwalking	2	-	2
See a cassowary	2	-	2
More information	1	-	1
Coffee shop	1	-	1
Observe birdlife	1	1	-
Escape tourists	1	1	-
Bring family dog	1	1	-
View flowing waterfall	1	1	-
See platypus	1	-	1
Stay longer	1	-	1
Restaurant – too expensive	1	-	1
Take a safe longer walk but not sure about creeks along beach	1	-	1
Go horse riding	1	-	1
See snakes	1	-	1
Total Responses	74*	15	59

* Note: Multiple responses were given by individual respondents.

Figure 9 illustrates the length of time visitors spent at Dubuji. More than half of all survey respondents (59.3%) spent one hour or less at the site. International respondents were likely to spend more time at the site than domestic respondents.

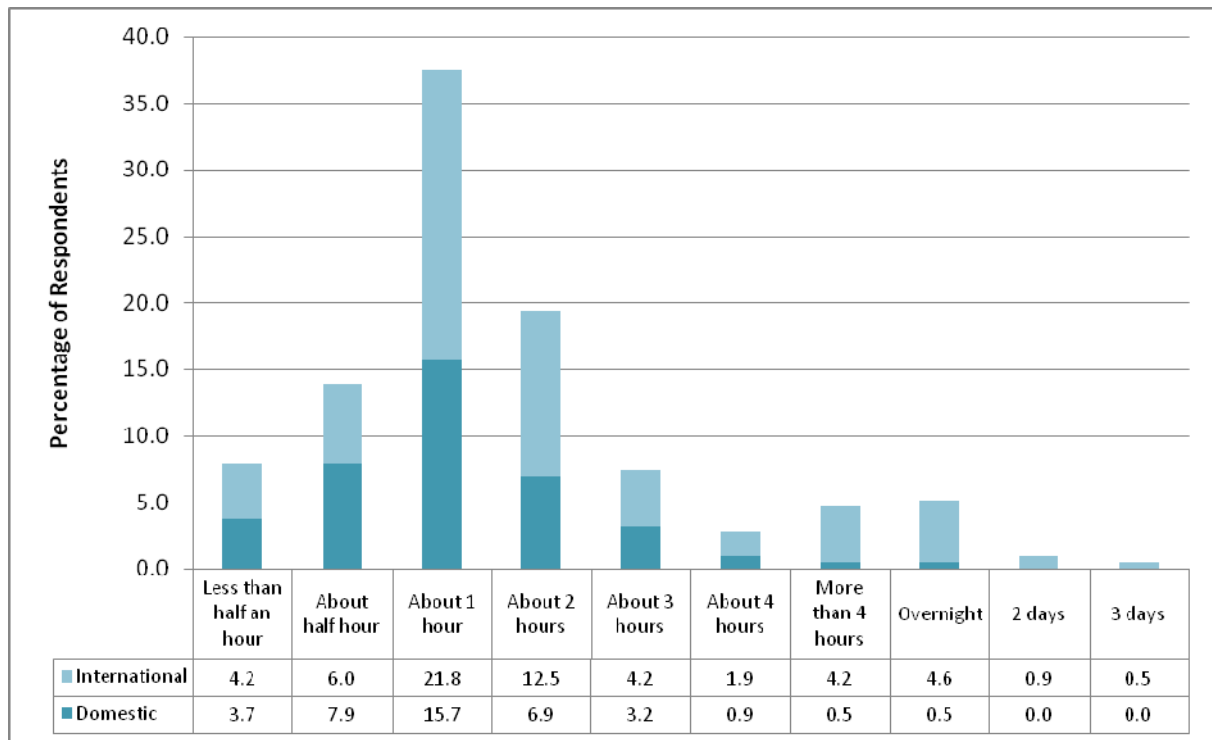


Figure 9: Approximate time spent at Dubuji by both domestic and international visitors (n = 216).



Willingness to Pay

Currently, visitors to protected natural areas in Queensland are not charged an access/entry fee. Respondents were asked to indicate how much they would be prepared to pay if an entrance fee was introduced at the Dubuji site.

As shown in Figure 10, 45.8% of respondents believe they should not have to pay a fee to access the Dubuji visitor site.

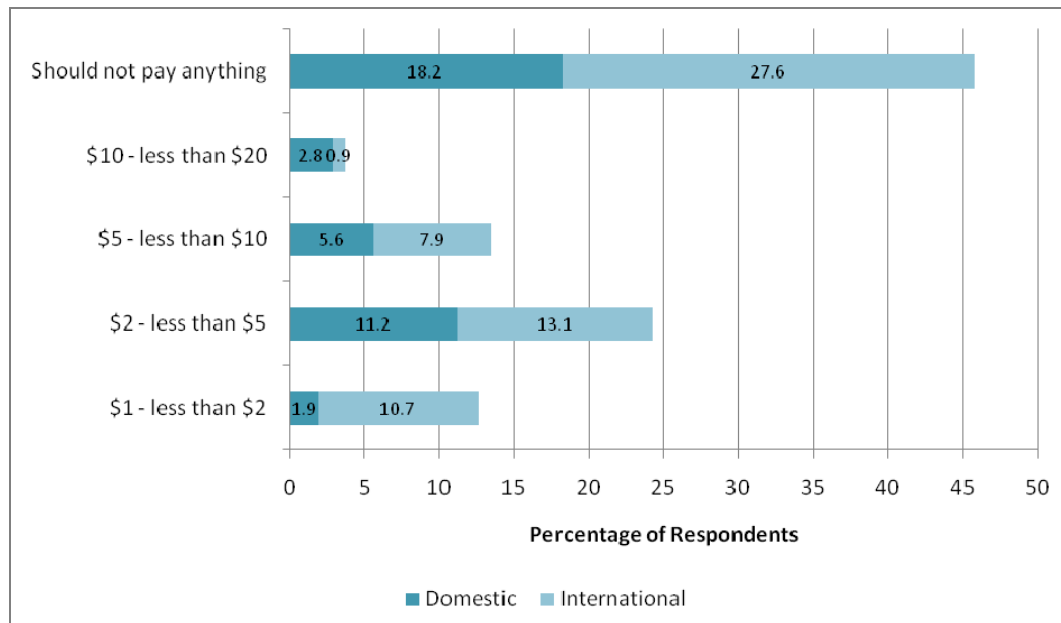


Figure 10: Survey respondents' willingness to pay an access/entrance fee to visit Dubuji (n = 214).

3.2 Perceptions of the Natural Environment

A series of statements were used to gather respondents' views on the natural environment at Dubuji. Respondents were asked to indicate their views using a Likert scale where 1 = 'strongly disagree' and 6 = 'strongly agree'. The results displayed in Table 14 show respondents considered the natural environment to be well-managed (mean = 5.71), interesting (5.41), in good condition (5.20) and appealing (5.14). Strong levels of disagreement were recorded against statement relating to the site being disturbed and impacted (mean = 2.72). International visitors had slightly higher levels of concern for the impacts of human activity on the site (mean = 4.36) than did domestic visitors (3.95).

Table 14: Domestic and international visitors' perceptions of the natural environment at Dubuji.

Perceptions of the natural environment at Dubuji	n	Overall Mean	Domestic visitors (mean)	International visitors (mean)
The natural environment at this site is interesting.	217	5.71	5.23	5.15
The condition of the natural environment at this site appears to be good.	217	5.41	5.32	5.47
The natural environment at this site is well managed.	217	5.20	5.15	5.23
In terms of natural attractions and scenic beauty this site is appealing.	215	5.14	5.16	5.12
I would like to spend more time exploring this natural environment.	218	4.80	4.94	4.70
I am concerned about the impacts of human activity on the natural environment at this site.	212	4.20	3.95	4.36
This site appears to be disturbed and impacted.	210	2.72	2.77	2.45

The actual levels of agreement/disagreement with statements about the natural features of the site are summarised in Table 15. Almost all respondents thought the site was well managed (95.0%), and most indicated they would like to spend additional time at the site (90.4%). There was a relatively high level of concern about the impacts of human activity on the natural environment at this site (70.3%). Only 23.8% of respondents thought that the site appeared to be disturbed and impacted.

Table 15: Survey respondents' perceptions of the natural features at Dubuji.

Perceptions of the natural environment at Dubuji	Percentage of survey respondents					
	Strongly disagree	Somewhat disagree	Mildly disagree	Mildly agree	Somewhat agree	Strongly agree
The natural environment at this site is interesting.	0.9	0.5	1.8	5.1	37.3	54.4
The condition of the natural environment at this site appears to be good.	-	0.9	2.8	15.2	38.7	42.4
The natural environment at this site is well managed.	0.9	0.9	3.2	8.8	44.2	42.0
In terms of natural attractions and scenic beauty this site is appealing.	0.5	2.3	2.8	14.9	36.4	43.3
I would like to spend more time exploring this natural environment.	1.4	1.8	6.4	27.5	31.7	31.2
I am concerned about the impacts of human activity on the natural environment at this site.	4.2	11.8	13.7	21.7	26.9	21.7
This site appears to be disturbed and impacted.	22.9	33.8	19.5	13.3	6.7	3.8

3.3 Perceptions and Use of the Site Facilities

Respondents were asked to comment on the facilities that were available. A Likert scale of 1 = 'strongly disagree' to 6 = 'strongly agree' was used to gather respondents' perceptions. Results illustrated in Table 16 indicate that the overall condition of the facilities at Dubuji was perceived to be good (mean = 5.08), well managed (5.08) and adequate (5.06).

Table 16: Domestic and international visitors' perceptions of the site facilities at Dubuji.

Perceptions of site facilities at Dubuji	n	Overall Mean	Domestic visitors (mean)	International visitors (mean)
The overall condition of the facilities at this site appears to be good.	210	5.08	5.09	5.06
The facilities and infrastructure at this site are well managed.	210	5.08	5.04	5.09
This site is appealing in terms of the character and attractiveness of the facilities.	210	5.06	5.01	5.09
The facilities at this site are adequate.	211	4.81	4.89	4.75
The presence of a ranger at sites like this is important to me.	210	3.88	3.86	3.89

Table 17 provides the percentages for the respondents' levels of agreement with each statement. Respondents reported that they considered the facilities to be in good condition (91.7%), well managed (88.4%) and attractive (84.7%). There was reasonable support for a ranger presence at the site (57.5%).

Table 17: Survey respondents' perceptions of the site facilities at Dubuji.

Perceptions of site facilities at Dubuji	Percentage of survey respondents					
	Strongly disagree	Somewhat disagree	Mildly disagree	Mildly agree	Somewhat agree	Strongly agree
The overall condition of the facilities at this site appears to be good.	0.4	0.7	7.2	23.1	34.7	33.9
The facilities and infrastructure at this site are well managed.	0.4	0.7	10.5	19.0	34.7	34.7
This site is appealing in terms of the character and attractiveness of the facilities.	2.2	1.8	11.3	21.1	30.5	33.1
The facilities at this site are adequate.	1.1	2.9	12.6	27.3	30.9	25.2
The presence of a ranger at sites like this is important to me.	15.0	13.6	13.9	22.8	21.8	12.9



Bridge on walkway to Myall Beach (Photo: Julie Carmody)

Presence of a Ranger On-site

Results presented in Figure 11 indicate an on-site ranger presence was viewed as being beneficial for a number of reasons: to provide information/education (53.8%); answer questions (40.1%); and for safety/security (33.5%).

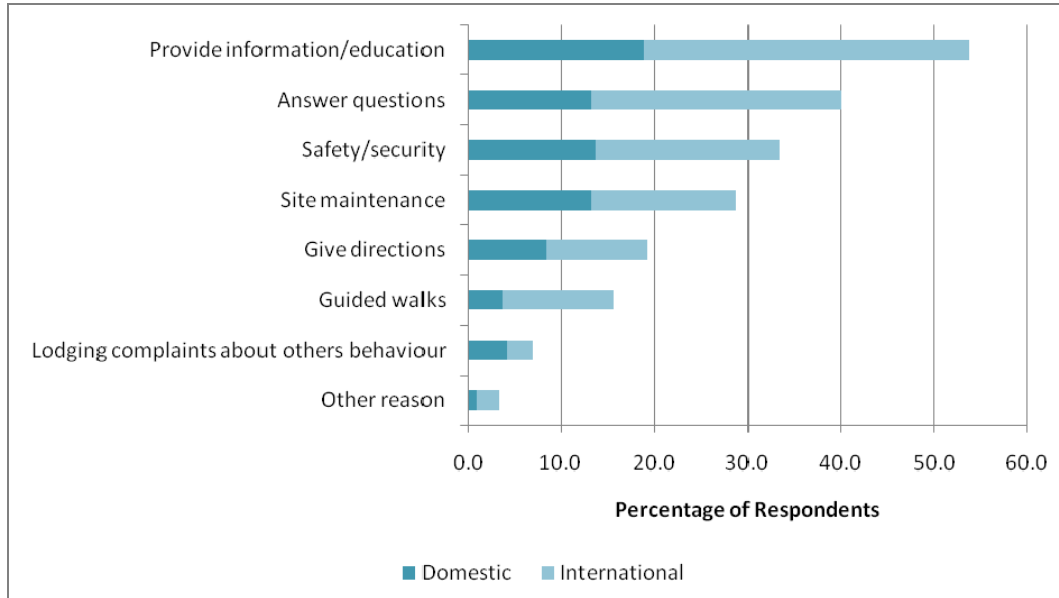


Figure 11: Survey respondents' suggested uses of an on-site Park Ranger at Dubuji in response to a multiple-response survey question (n = 212).

Use of Site Facilities

A multiple-response format was used to ensure respondents had the opportunity to indicate the facilities they had used at the Dubuji site. As indicated in Figure 12, the boardwalk (86.2%), walking track (80.7%) and toilets (64.7%) were the most frequently used facilities. There were no significant differences between domestic and international visitors in terms of facilities use. About a quarter of all respondents (24.3%) indicated that they used the rubbish bin, however a rubbish bin is not provided at the site. This may be an example of social desirability bias previously discussed in the Limitations section (page 5).

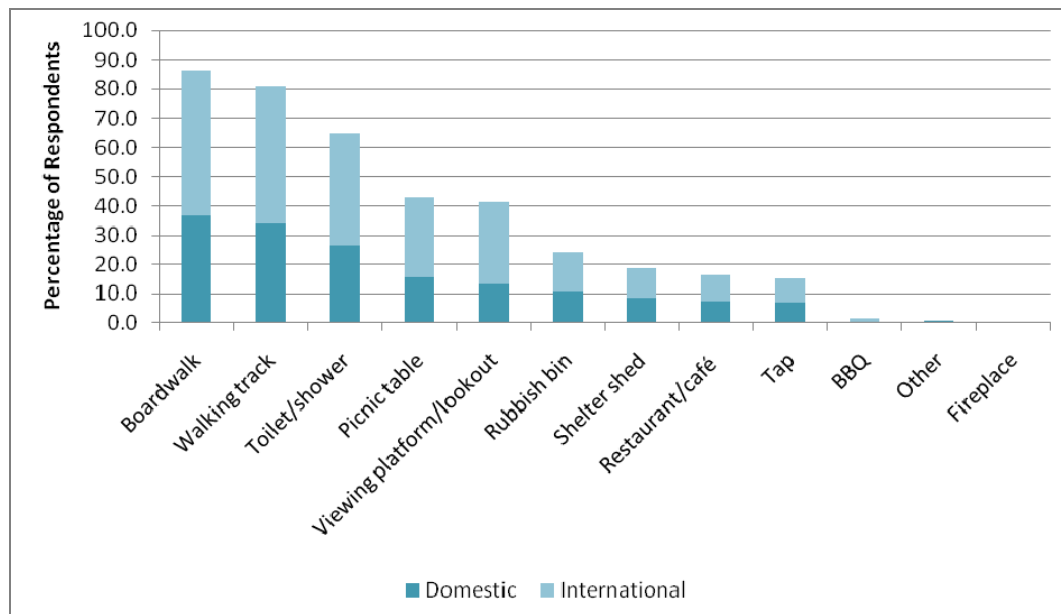


Figure 12: Most popular Dubuji site facilities used by survey respondents, cited in response to a multiple-response survey question (n = 218).

Expected Site Facilities

Respondents were asked to indicate if there were facilities that they would have liked to have seen at the Dubuji visitor site. Twenty-seven respondents (12.3% of the sample) responded to this question, listing 29 expectations in total (Table 18). The most sought after facilities included rubbish bins (eight responses) followed access to drinking water (five responses), showers (four responses) and a stinger net for swimming at Myall Beach (three responses).

Table 18: Facilities expected to be available at Dubuji by survey respondents (n = 27).

Expectation	Overall	Domestic	International
Rubbish bin	8	2	6
Drinkable tap water	5	1	4
Showers	4	1	3
Stinger net for swimming	3	2	1
Toilet	1	1	-
Walking tracks	1	1	-
Canteen	1	-	1
Plant and natural features identification	1	-	1
Signage	1	1	-
Working BBQ	1	-	1
Seating	1	-	1
Free camp zone	1	1	-
Cigarette butt bin	1	-	1
Total Responses	29*	10	19

* Note: Multiple responses were given by individual respondents.

Information about Dubuji

Survey respondents were asked to indicate the sources they had used to gain information about the Dubuji site prior to their visit. Figure 13 indicates the main information sources used to gain information were a map which indicated it as a tourist site (32.3%), a travel guide or book (26.1%), road signs (25.7%), word-of-mouth (21.4%) and tourism information centres in North Queensland (17.2%). International visitors were more likely to use maps, guide books and road signs than domestic visitors.

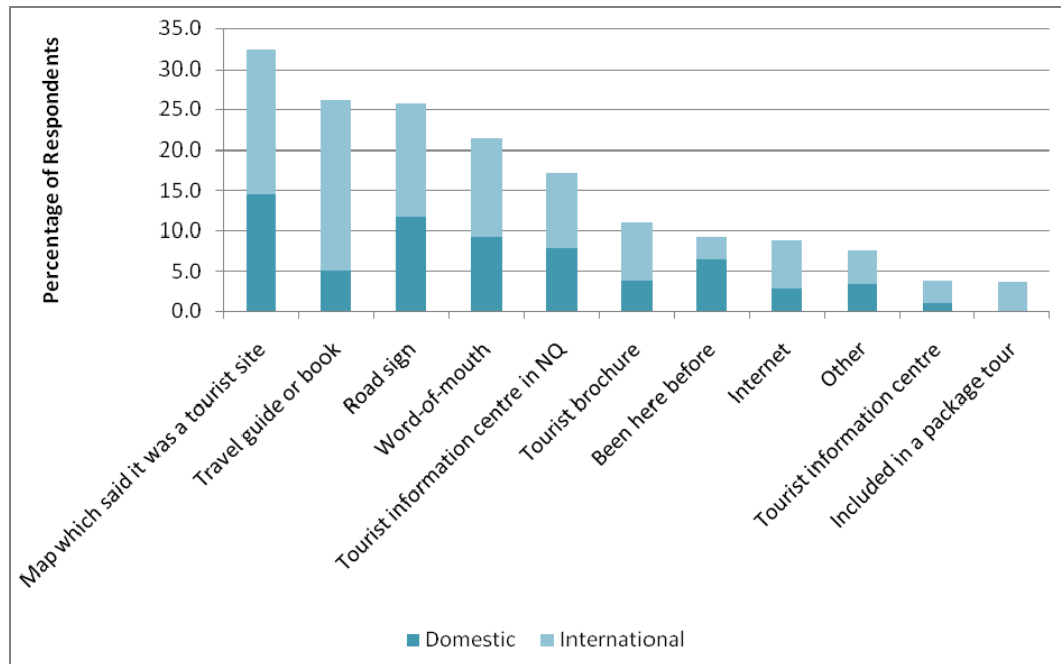


Figure 13: Sources of information consulted by survey respondents prior to visiting Dubuji (n = 214).

Sources of information referred to by visitors prior to visiting Dubuji were considered accurate by 82.6% of the sample. Table 19 provides comments from ten respondents who considered the information inaccurate. Two respondents indicated there was no waterfall while individual responses indicated difficulty with finding the entrance back to Dubuji from the beach and other general comments about the Cape Tribulation area.

Table 19: Comments from survey respondents regarding the inaccuracy of information about Dubuji sought prior to visiting the site (n = 10).

Comment	Frequency (n)
No waterfall	2
Didn't get a lot of information, just that the site is here	1
Petrol station needs to be made clearer in literature	1
Not enough information about the weather	1
Thought Cape Tribulation was a village	1
Sketch map only – first entry from beach not marked and caused some confusion	1
Unable to find walk track back from the beach	1
There are more tracks and tours available – I didn't know about many of the activities	1
Website advises that no firewood is available, but there is plenty around	1
Total Responses	10



Pandanus palm, Dubuji (Photo: Julie Carmody)

On-site Signage

Interpretative and directional signs are important features of the infrastructure at any visitor site. Two-thirds of respondents (66.2%, $n = 129$) agreed that they had referred to the interpretative signage available at the site. However as can be seen in Table 20, almost the entire sample went on to rate aspects of the on-site signage.

Table 20 provides respondents' level of agreement with statements about the on-site and interpretative signage at Dubuji based on a Likert scale of 1 = 'strongly disagree' to 6 = 'strongly agree'. Results indicate that respondents thought information about rules and safety information was easy to understand (mean = 5.23) and that signs, maps and directions were easy to find (5.14) and helped respondents find their way around (5.08). Compared to international respondents (mean = 3.68) domestic respondents were more likely to find Aboriginal cultural information interesting and informative (4.03). Domestic respondents had a higher level of agreement (mean = 4.0) with the statement that Aboriginal cultural information helped them to understand the significance of the area to the rainforest Aboriginal people than their international counterparts (3.63).

Table 20: Domestic and international survey respondents' perceptions of on-site signage at Dubuji.

Perceptions of on-site signage at Dubuji	n	Overall Mean	Domestic visitors (mean)	International visitors (mean)
Signs, maps and directions				
Were easy to find	211	5.14	5.05	5.19
Helped me to find my way around	208	5.08	4.95	5.16
The rules and safety information				
Were easy to understand	209	5.23	5.11	5.30
Addressed my interests and concerns	202	4.94	4.88	4.98
The information about natural features and values				
Was interesting and informative	211	4.91	4.91	4.90
Helped me to better appreciate the special natural features of the area.	210	4.84	4.81	4.84
The Aboriginal cultural information				
Was interesting and informative	179	3.82	4.03	3.68
Helped me to understand the significance of this area for rainforest Aboriginal people	182	3.76	4.00	3.63

Table 21 provides the actual percentage of responses for each level of agreement / disagreement to the survey question about on-site information. Almost all respondents agreed that the signage about the natural features and values of the site was interesting and informative (92.9%) and helped them to appreciate the natural features and values (88.6%). A small number of respondents thought the signs, maps and directions were not easy to find (5.2%) and that these signs did not help them to find their way around the site (5.7%).

Table 21: Survey respondents' perceptions of on-site tourism information provided at Dubuji.

Perceptions of on-site information at Dubuji	Percentage of survey respondents					
	Strongly disagree	Somewhat disagree	Mildly disagree	Mildly agree	Somewhat agree	Strongly agree
Signs, maps and directions						
Were easy to find	-	2.4	2.8	14.2	39.8	40.8
Helped me to find my way around	-	1.9	3.8	15.4	41.8	37.1
The rules and safety information						
Were easy to understand	0.5	1.4	2.4	12.0	37.3	46.4
Addressed my interests and concerns	0.5	2.0	4.0	21.8	39.6	32.1
The information about natural features and values						
Was interesting and informative	0.5	1.4	5.2	25.1	35.1	32.7
Helped me to better appreciate the special natural features of the area.	0.5	3.3	7.6	21.4	35.3	31.9
The Aboriginal cultural information						
Was interesting and informative	6.7	15.1	18.4	22.9	22.9	14.0
Helped me to understand the significance of this area for rainforest Aboriginal people	8.2	15.9	18.1	21.4	19.8	16.6

Respondents were asked to suggest what additional interpretative information they would like to see at the site (Table 22). Forty-five respondents (20.5% of the sample) provided 47 suggestions for additional interpretative information. Sixteen respondents suggested more information about Aboriginal culture while six respondents suggested that wildlife identification charts be installed. Suggestions were also made about the need for more interpretation about flora and fauna.

Table 22: Survey respondents' suggested additional visitor information that could be made available at the Dubuji site (n = 73).

	Overall	Domestic	International
Cultural Information			
Aboriginal information on-site	16	3	13
Historic significance	2	2	-
Flora and Fauna			
Wildlife identification charts	6	1	5
More information about natural features and wildlife	5	2	3
More comprehensive understanding of the ecosystem and animal species	3	2	1
Forestry information	2	-	2
Plant identification	1	1	-
General habitat information	1	1	-
More about trees and their uses in Aboriginal culture	1	1	-
Crocodile information	1	-	1
Walk Information			
Walking track signage	1	-	1
Other			
Anything	3	1	2
More warnings	1	1	-
Better signage	1	-	1
Proximity of other attractions in kilometres	1	-	1
Better road signs	1	1	-
Alternative safe swimming area e.g. cannot swim here but go to ... for safe swimming.	1	-	1
Total responses	47	16	31

3.4 Visitor Experience

Respondents were asked to comment on aspects of their visit that enhanced or increased their enjoyment of the site using an open ended question. Seventy-three respondents provided comments (33.3% of the sample). Results were divided into four categories: natural; facilities; psycho-social; and others (Table 23). The boardwalk (16.4%), the beauty of the site (13.6%), wonderful information about the site (9.5%) and the wildlife (8.2%) enhanced the visitor experience. It should be noted a male cassowary and chick were seen at the site by some respondents on two of the survey collection days.

Table 23: Aspects that visitors considered enhanced or increased their enjoyment of Dubuji (n = 73).

	Frequency (n)	Percentage (%)
Natural		
Beautiful place	10	13.6
The wildlife	6	8.2
Unspoilt nature of the site	3	4.1
Great weather	2	2.7
Seeing a forest dragon	2	2.7
Rain	2	2.7
Seeing a crocodile	1	1.4
Rainforest meets reef	1	1.4
Nature – plants and wildlife	1	1.4
Rainforest	1	1.4
Swamp land	1	1.4
Finding a coconut on the beach – tasty	1	1.4
Crocodile footprints in the sand	1	1.4
Facilities		
Boardwalk	12	16.4
Wonderful information about the site	7	9.5
Use of boardwalk to keep 'floor' undisturbed	2	2.7
Platforms/ water lookouts helping for a better view and photo	1	1.4
Maintained walkways	1	1.4
Awesome infrastructure	1	1.4
Boardwalk 'grating' made it safe to walk on	1	1.4
Picnic shelters	1	1.4
Area is clean and looking as though minimal impact	1	1.4
Well maintained facilities	1	1.4
Psycho-social		
Peace and tranquillity	5	6.8

	Frequency (n)	Percentage (%)
The walk	2	2.7
Isolation	2	2.7
Few other tourists	1	1.4
Interaction with nature	1	1.4
Knowing that the site is a place for Aborigines	1	1.4
Other		
Tour guide information	1	1.4
Total Responses	73	100.0

Respondents were also asked for their views on aspects of the site that detracted from their enjoyment. A total of 56 responses were received from 54 respondents (24.6% of the entire sample) and the results divided into five categories, generally paralleling the categories used to indicate the appealing aspects of the site (Table 24). The categories used are: nature; facilities; psycho-social; rules and regulations; and other. Natural aspects of the site that detracted from the visitor experience included the weather (16.2%) and a range of insects and animals including mosquitoes. A large number of other concerns were listed but apart from litter (12.4%) most concerns were only expressed by one or two respondents.

Table 24: Aspects visitors considered took away or detracted from their enjoyment of Dubuji (n = 54).

	Frequency (n)	Percentage (%)
Natural		
The weather	9	16.2
Mosquitoes	2	3.5
Pig damage, particularly around creeks	2	3.5
Crocodiles	1	1.8
Some overgrowth	1	1.8
Biting insects – need a sign to warn people to use insect repellent	1	1.8
Jellyfish	1	1.8
Mangrove area stank – smells polluted on way to Myall Beach	1	1.8
Dead plants due to cyclone damage	1	1.8
Facilities		
Trimmed tree branches left on boardwalk to block walkway	2	3.5
Grubby toilets	1	1.8
Wire netting on boardwalk needs tending to	1	1.8
Lack of bins	1	1.8
Rules/ Regulation/ Safety		
Not being able to swim safely	1	1.8

	Frequency (n)	Percentage (%)
Psycho-social		
A man with a tripod and flashlight	1	1.8
Other		
Litter on track	5	8.9
This unnecessarily long survey	3	5.4
Toilet paper/ some litter	2	3.5
Too commercialised	2	3.5
Lack of information	2	3.5
In vicinity of the park – open cleared land, galvanised sheds, obvious advertising, homes not blending into hillside	2	3.5
Rubbish on the beach	1	1.8
Please make it a 'no smoking' site	1	1.8
Cars	1	1.8
Bad road signs	1	1.8
Lack of 1 or 2 grocery stores	1	1.8
Speed bumps	1	1.8
Expensive accommodation	1	1.8
Some guy in Speedos	1	1.8
Information bureau at Mason's – not impressed, Mason's café – not impressed, 10 years behind	1	1.8
Have to leave and go back to work	1	1.8
PK's Jungle Village is a bit noisy	1	1.8
No overnight free camping – price of tourism	1	1.8
No good café	1	1.8
Getting to our campground	1	1.8
Total Responses	56*	100.0

* Note: Multiple responses were given by individual respondents.

The results reported in Tables 23 and 24 suggest respondents considered Dubuji to be an enjoyable site with an excellent natural environment and adequate visitor facilities.

Other Visitors

The behaviour of other visitors at a site can affect the level of enjoyment an individual derives from visiting that site. In circumstances where overcrowding occurs the overall level of enjoyment could be expected to fall. However, the link between perceived crowding and satisfaction is weak and is dependent on personal norms, situational variables and site infrastructure (West, 1981; Stankey and McCool, 1984; Kalisch and Klaphake, 2007). A series of statements were presented in the survey and respondents were asked to comment using a Likert scale of 1 = 'strongly disagree' to 6 = 'strongly agree'. Table 25 shows that overall there was little concern that the behaviour of other visitors to Dubuji detracted from survey respondents' enjoyment of the site (mean = 1.71), and the presence of other people preventing respondents from doing what they wanted to do (mean = 1.85).

Table 25: Domestic and international visitors' perceptions of other site visitors.

	n	Overall Mean	Domestic visitors (mean)	International visitors (mean)
The behaviour of other visitors at this site has been on the whole environmentally responsible.	208	3.76	3.72	3.78
There were too many people at this site today.	211	1.97	2.10	1.89
The presence of other people at this site prevented me from doing what I wanted to.	210	1.85	1.78	1.80
The behaviour of some visitors at this site detracted from my enjoyment of this site.	207	1.71	1.89	1.59

Table 26 provides respondents' levels of agreement or disagreement with statements relating to the behaviour of other visitors at the site. Many respondents agreed the behaviour of other visitors was environmentally responsible (61.5%) and the behaviour of other visitors was not a great concern (7.2%). Overcrowding at the site was not considered to be a problem (89.6%).

Table 26: Perceptions of other visitors at Dubuji.

Perceptions of other visitors at Dubuji	Percentage of survey respondents					
	Strongly disagree	Somewhat disagree	Mildly disagree	Mildly agree	Somewhat agree	Strongly agree
The behaviour of other visitors at this site has been on the whole environmentally responsible.	22.1	10.6	5.8	13.0	27.3	21.2
There were too many people at this site today.	45.0	30.4	14.2	6.2	1.4	2.8
The presence of other people at this site prevented me from doing what I wanted to.	56.2	25.2	8.6	6.2	1.4	2.4
The behaviour of some visitors at this site detracted from my enjoyment of this site.	57.5	29.5	5.8	2.4	1.9	2.9

3.5 Additional Comments

The survey instrument provided respondents with the opportunity to record comments on any aspect of their visit. Comments were received from 26 respondents at Dubuji. Positive comments were mostly centred on the actual visitor site, whilst most negative comments were directed at the Cape Tribulation area in general.

Date	Comment
28 October 2008	<p>'This place is amazing, keep it that way. More trails that aren't boardwalks would be nice. Showers at the campground at Noah Beach would be nice as well.'</p> <p><i>German visitor, female, 20 years</i></p>
31 July 2009	<p>'My husband thought the boardwalk experience was boring, but he doesn't always appreciate nature for its serenity.'</p> <p><i>Victorian visitor, female, 38 years</i></p>
31 July 2009	<p>'Thanks, a good effort in managing the WHA – just keep up the pig control.'</p> <p><i>Victorian visitor, female, 44 years</i></p>
31 July 2009	<p>'Well sign posted, well laid out, good information posts. Pity about the weather, but the trees would disagree.'</p> <p><i>UK visitor, male, 52 years</i></p>
31 July 2009	<p>'Pig damage is very widespread and will damage flora and drive away fauna.'</p> <p><i>Victorian visitor, male, 64 years</i></p>
31 July 2009	<p>'We are enjoying the area very much, but are shocked at the damage by feral pigs.'</p> <p><i>Victorian visitor, female, 62 years</i></p>
31 July 2009	<p>'Good photo opportunities.'</p> <p><i>UK visitor, female, 21 years</i></p>
31 July 2009	<p>'This is a showcase and should be treated as such. You come into this park to feel different and to learn something.'</p> <p><i>Victorian visitor, female, 38 years</i></p>
31 July 2009	<p>'Please register my survey as constructive criticism over the fact that humans have left too big a 'footprint' on the area.</p> <p>I would like the authorities to know that further human destruction of this area may result in the declassification of the area as a World Heritage site. This is obviously no one's interest. There are former World Heritage sites that have now been DELISTED.</p> <p>I don't understand why farms are within a WHA. In my opinion, further land clearing for farming purposes will expose this area to losing its WHA status. The state/federal governments should purchase all farms (compulsory acquisition) and allow the land to regenerate. What's wrong with farmers being forced out of this area and into non-national park areas? This is absolutely perplexing to me.</p> <p>Positives are that the area is quite relaxed and 95% in good condition. Cape</p>

Date	Comment
	Tribulation has met and in some instances (such as Dubuji Boardwalk) exceeded my expectation. <i>New South Wales visitor, male, 31 years</i>
31 July 2009	'It has been thoroughly enjoyable and the boardwalk lets you experience the whole area in a way that does not disturb the environment – well done.' <i>New South Wales visitor, female, 60 years</i>
31 July 2009	'Good amenities, great day out – even in the rain.' <i>Victorian visitor, male, 29 years</i>
31 July 2009	'More information about the ecosystems would have been nice. There was some which was clear and interesting so more along the same vein would be good.' <i>South Australian visitor, female, 24 years</i>
31 July 2009	'No more restaurants or hotels.' <i>Canadian visitor, male, 45 years</i>
31 July 2009	'When leaving the ferry, the bottom of our campervan hit the ground and damaged the water tank – the approaches should be raised. No ferry concession for retirees (we are self funded). Not enough information approaching sites.' <i>New South Wales visitor, female, 61 years</i>
27 November 2009	'Very good site. We are not used to seeing such landscapes.' <i>French visitor, female, 38 years</i>
27 November 2009	'Amazing forest and beaches.' <i>French visitor, female, 37 years</i>
27 November 2009	'It seems to be very commercial with many resorts, expensive tours, etc., high fee for visitors centre. The focus seems to be on taking as much money as possible from tourists more than the natural features of the site.' <i>Canadian visitor, female, 32 years</i>
27 November 2009	'Very beautiful here but very commercial! Can spend more money here in a day on tours and activities and walks than a family would spend at an amusement park.' <i>Canadian visitor, male, 30 years</i>
26 April 2010	'If you wanted to create a charge for National Park rather than paying for one park make a pass for all parks in Queensland that give three months for you to use, e.g. like in Tasmania.' <i>Victorian visitor, female, 31 years</i>
26 April 2010	'Tourists here seem responsible.' <i>UK visitor, female, 34 years</i>

Date	Comment
25 April 2010	<p>'It is a much better/more interesting walk than Marrdja.'</p> <p><i>New South Wales visitor, male, 47 years</i></p>
25 April 2010	<p>'Please fix the BBQ, not enough bins here – if any.'</p> <p><i>German visitor, male, 25 years</i></p>
25 April 2010	<p>'This survey needs to be done when it is high season for tourists. Not when it's only low season.'</p> <p><i>Queensland visitor, male, 30 years</i></p>
25 April 2010	<p>'Area needs more sites like this – smaller but with picnic/BBQ area. Would have been nice if I could have been able to swim safely, no crocs no stingers.'</p> <p><i>Queensland visitor, male, 27 years</i></p>
26 April 2010	<p>'Fantastic place.'</p> <p><i>New South Wales visitor, female, 28 years</i></p>
26 April 2010	<p>'A lot of the plants seemed dead, but having read the sign before doing the walk, it's due to a cyclone some years ago and the plants are only regenerating. It made me look at the scenery from a different point of view.'</p> <p><i>New South Wales visitor, female, 28 years</i></p>

4. Management Considerations

The findings of this survey indicate that respondents found Dubuji to be an enjoyable site that provides adequate interpretative signage, is focused on the natural values of the site, provides access to Myall Beach and provides barbeque and picnic facilities. The findings presented in this report suggest management consideration is given to the following matters:

- The boardwalk is a popular feature of the site.
- Additional interpretative information about Aboriginal culture is supported by respondents.
- Damage caused by feral pigs was observed on some sections of the boardwalk.
- There were some concerns raised about litter at the site.
- The absence of rubbish bins was noted by a number of respondents.
- Use of the site by commercial tour operations appears low. Discussions with tour operators may give some insight as to why the site may not be suitable for their purposes.
- Barbeques should be maintained regularly, particularly during the peak visitor season and prior to long weekends.
- The branches that obscure the entrance signage at the site need to be trimmed.
- The site is regularly inundated during heavy rain. Consideration should be given to improved drainage. This will increase the accessibility of the site even during periods of high rainfall.

5. References

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Appendix 1: Site Survey Instrument



Visitor Site Survey in the Wet Tropics World Heritage Area

Interviewer:

Survey Location:

Survey Date: Time:

Weather: ☐ Sunny ☐ Overcast ☐ Raining ☐ Hot ☐ Warm ☐ Cool

Other Comments: (e.g. windy, smoky, mist)

.....

Dear Visitor,

We are researchers from James Cook University, School of Business – Tourism, and on behalf of the Wet Tropics Management Authority we are exploring visitors' expectations and experiences of this Wet Tropics site. We would be very grateful if you would participate in the study by completing this questionnaire.

Your participation will help to improve visitor services and the continued management of sites by understanding visitors' needs and views.

The questionnaire is **voluntary** and all **responses remain completely anonymous**.

The questionnaire will take approximately **15 minutes** to complete.

Thank you very much for your participation.

If you would like any more information about this project please contact the project manager. If you would like to discuss any ethical matters regarding this project please contact the Ethics Administrator. This project has Human Ethics approval H3100 from James Cook University.

**PLEASE DETACH AND RETAIN THIS INFORMATION
PAGE ONLY FOR YOUR FUTURE REFERENCE**

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HOW TO COMPLETE THIS QUESTIONNAIRE – Where questions require a ‘Yes’ or ‘No’ answer, or multiple response, please put a tick ‘✓’ in the checkbox beside the appropriate response.

Where a scale question is provided (e.g. scale from 1 to 6) please circle the response which best applies.

SECTION A: BACKGROUND INFORMATION

1. **Where do you normally live?** ☐ Within Australia Postcode:
☐ Overseas Country:
2. **How long have you lived there?** Years
3. Which of these best describes your **occupation**?
☐ Self-employed ☐ Professional ☐ Retail ☐ Domestic duties
☐ Management ☐ Office/clerical ☐ Public service ☐ Manual/factory work
☐ Service industry ☐ Tradesperson ☐ Student ☐ Retired/semi-retired
☐ Other

4. What is the highest level of **formal education** you have completed so far?
☐ Primary (1-7 years of education)
☐ Secondary (8-12 years of education)
☐ Tertiary A (Technical or further education institution)
☐ Tertiary B (University)
5. **What is your age?** years
6. **Gender:** ☐ Male ☐ Female

SECTION B: TRANSPORT AND TRAVEL

7. Are you with an **organised tour**? ☐ Yes
☐ No (Go to Question 8)
 If you answered ‘Yes’, what is the name of the tour company?

 Approx. number of people on your tour:
8. If you travelled in a **private or hired vehicle**, how many people including yourself are in your vehicle?
 Adults Children ☐ Private vehicle ☐ Hired vehicle

9. In your travels today, where did you **previously visit** before coming to this site?
(e.g. township, visitor site)

.....

10. In your travels today, where do you plan to go **after leaving this site**?

.....

11. How often do you **visit natural areas** like this (e.g. National Parks)?

- ☐ This is my first time
☐ Less than once a year
☐ Once a year
☐ Between 2 and 5 times a year
☐ More than 5 times a year

SECTION C: REASONS FOR VISITING

12. Please indicate how important the following **reasons** were for you **visiting this site** today.

	Not important	Slightly important	Moderately important	Important	Quite important	Very important
See natural features and scenery	1	2	3	4	5	6
Be close to / experience nature	1	2	3	4	5	6
Social with family or friends	1	2	3	4	5	6
Rest and relax	1	2	3	4	5	6
Experience tranquillity	1	2	3	4	5	6
Outdoor exercise	1	2	3	4	5	6
Opportunities for short walks	1	2	3	4	5	6
Opportunities for long walks	1	2	3	4	5	6
Because it is a World Heritage Area	1	2	3	4	5	6
Because it is a National Park	1	2	3	4	5	6
Learn about native animals and plants	1	2	3	4	5	6
Learn about Aboriginal culture	1	2	3	4	5	6
Other (please specify)	1	2	3	4	5	6

13. What **activities** did you engage in at this site today?

- | | |
|---|---|
| <input type="checkbox"/> Observing scenery | <input type="checkbox"/> Walking – short (1 hour or less) |
| <input type="checkbox"/> Bird watching | <input type="checkbox"/> Walking – long (1-6 hours) |
| <input type="checkbox"/> Observe wildlife | <input type="checkbox"/> Swimming |
| <input type="checkbox"/> Photography / painting / drawing | <input type="checkbox"/> Guided tour |
| <input type="checkbox"/> Picnic / barbeque (BBQ) | <input type="checkbox"/> Looking at interpretation material |
| <input type="checkbox"/> Using café / restaurant | <input type="checkbox"/> Relaxing |
| <input type="checkbox"/> Camping | <input type="checkbox"/> Other (please specify): |

.....

14. Were there particular things you wanted to do today at this site which you were unable to do?

- ☐ Yes
☐ No

If you answered 'Yes', please specify:

.....

15. How **long** have you spent at this site today?

- | | |
|--|--|
| <input type="checkbox"/> Less than half an hour | <input type="checkbox"/> About 3 hours |
| <input type="checkbox"/> About half an hour | <input type="checkbox"/> About 4 hours |
| <input type="checkbox"/> About 1 hour | <input type="checkbox"/> More than 4 hours |
| <input type="checkbox"/> About 2 hours | <input type="checkbox"/> Overnight |
| <input type="checkbox"/> Days (please specify) | |

16. If an **entrance fee** were introduced to access this site today, how much would you be willing to pay?

- ☐ \$1 – less than \$2 (AUD)
☐ \$2 – less than \$5 (AUD)
☐ \$5 – less than \$10 (AUD)
☐ \$10 – less than \$20 (AUD)
☐ I do not think I should pay anything to access this site as a day visitor.

SECTION D: NATURAL ENVIRONMENT

17. The following statements are about the **natural features** of this site. Please rate the extent to which you agree or disagree with each statement.

	Strongly disagree	Somewhat disagree	Mildly disagree	Mildly agree	Somewhat agree	Strongly agree
The natural environment at this site is interesting.	1	2	3	4	5	6
I would like to spend more time exploring this natural environment.	1	2	3	4	5	6
In terms of natural attractions and scenic beauty this site is appealing.	1	2	3	4	5	6
The condition of the natural environment at this site appears to be good.	1	2	3	4	5	6
The natural environment at this site is well managed.	1	2	3	4	5	6
I am concerned about the impacts of human activity on the natural environment at this site.	1	2	3	4	5	6
This site appears to be disturbed and impacted.	1	2	3	4	5	6

SECTION E: SITE FACILITIES

18. What facilities have you used at this site today? (Tick as many as applicable)

☐ Picnic table

☐ Walking track

☐ Shelter shed

☐ Boardwalk

☐ Restaurant / café

☐ Viewing platform / lookout

☐ Rubbish bin

☐ Fire place

☐ Toilet / showers

☐ Barbeque

☐ Tap

☐ Other (please specify)

19. Were there particular **facilities at this site you were expecting** to find which were not available?

☐ Yes

☐ No

If you answered 'Yes', please specify:

.....

.....

20. Please rate the extent to which you agree or disagree with each of the following statements about the **facilities and management** at this site.

	Strongly disagree	Somewhat disagree	Mildly disagree	Mildly agree	Somewhat agree	Strongly agree
The site is appealing in terms of the character and attractiveness of the facilities.	1	2	3	4	5	6
The facilities at this site are adequate.	1	2	3	4	5	6
The overall condition of the facilities at this site appears to be good.	1	2	3	4	5	6
The facilities and infrastructure at this site are well managed.	1	2	3	4	5	6
The presence of a ranger at sites like this is important to me.	1	2	3	4	5	6

21. If you **agreed the presence of a ranger was important**, what are the reasons for this?

☐ To provide information / education

☐ To give directions

☐ To answer questions

☐ For lodging complaints about others' behaviour

☐ To take us on guided walks

☐ For site maintenance

☐ For safety / security

☐ Other (please specify)

.....

SECTION F: INFORMATION

22. How did you **find out about this site**?

- | | |
|---|---|
| <input type="checkbox"/> Have been here before | <input type="checkbox"/> Travel guide or book |
| <input type="checkbox"/> Road sign | <input type="checkbox"/> From the web |
| <input type="checkbox"/> Word of mouth | <input type="checkbox"/> The trip here was included in a package tour |
| <input type="checkbox"/> Map which said it was a tourist site | <input type="checkbox"/> Tourist brochure (which one?) |
| | |
| <input type="checkbox"/> Tourist information centre in North Queensland | <input type="checkbox"/> Tourist information centre (other) |
| | |
| <input type="checkbox"/> Other (please specify): | |

23. If you obtained **prior information** about this site, was the information accurate?

- ☐ Yes
☐ No

If you answered 'No', please specify:

.....

24. Did you refer to any of the information available at this site today? ☐ Yes
☐ No

25. Please rate the extent to which you agree or disagree with the following statements about **information available** at this site.

	Strongly disagree	Somewhat disagree	Mildly disagree	Mildly agree	Somewhat agree	Strongly agree
Signs, maps and directions...						
were easy to find	1	2	3	4	5	6
helped me to find my way around	1	2	3	4	5	6
The rules and safety information...						
were easy to understand	1	2	3	4	5	6
addressed my interests and concerns	1	2	3	4	5	6
The information about natural features and values...						
was interesting and informative	1	2	3	4	5	6
helped me to better appreciate the special natural values of the area	1	2	3	4	5	6
The Aboriginal cultural information...						
was interesting and informative	1	2	3	4	5	6
helped me to understand the significance of this area for Rainforest Aboriginal people	1	2	3	4	5	6

26. If you were to visit this site again, is there any **additional information** you would like?

☐ Yes

☐ No

If you answered 'Yes', please specify:

.....

.....

SECTION G: VISITOR EXPERIENCE

27. Were there any particular aspects of your visit that **increased / enhanced your enjoyment** of this site?

☐ Yes

☐ No

If you answered 'Yes', please specify:

.....

.....

28. Were there any particular aspects of your visit that **took away / detracted from your enjoyment** of this site?

☐ Yes

☐ No

If you answered 'Yes', please specify:

.....

.....

29. Please rate how strongly you agree or disagree with the following statements about **other visitors at this site** today.

	Strongly disagree	Somewhat disagree	Mildly disagree	Mildly agree	Somewhat agree	Strongly agree
There were too many people at this site today.	1	2	3	4	5	6
The presence of other people at this site prevented me from doing what I wanted to do.	1	2	3	4	5	6
The behaviour of other visitors at this site has been on the whole environmentally responsible.	1	2	3	4	5	6
The behaviour of some visitors at this site detracted from my enjoyment of this site.	1	2	3	4	5	6

ADDITIONAL COMMENTS:

.....

.....

.....

.....

.....

.....

.....

.....

.....

THANK YOU VERY MUCH FOR YOUR PARTICIPATION

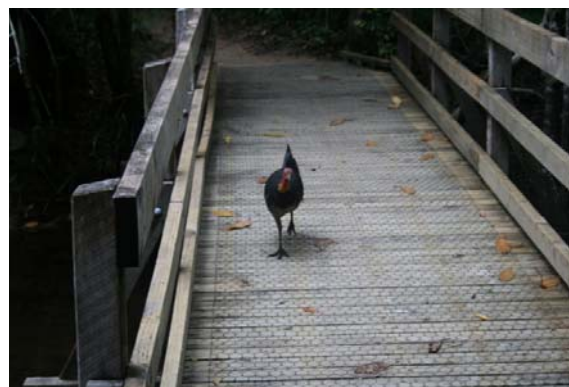
Appendix 2: Site Photographs

Dubuji site signage



Photographs by Julie Carmody

Dubuji visitor facilities



Photographs by Julie Carmody